Hike on the Mountain (`hike`)

Antonio loves to take long walks in the mountains every time he gets the chance. This time, his friend William suggested to visit him in Switzerland to hike the tallest and most beautiful mountains there.

During his hike, Antonio is curious about the final altitude, in meters, reached at the end of the journey. Sadly, he forgot his smartwatch in Italy, so he decides to manually record the changes in altitude every minute.

Figure 1: Antonio during the hike.

Antonio recorded a change in altitude D_i for each minute i of his journey, which was N minutes long. Each altitude change is at most $+3$ meters (when Antonio was walking up very fast) and at least -3 meters (when he was walking down very fast), but it could be any integer number in-between. It could also be 0, when Antonio was taking a picture or looking at the panorama.

Given these altitude changes, and knowing that the journey started at the base camp at an altitude of 3000 meters, Antonio wants to calculate the final altitude he reached. Help him do just that!

Input

The first line contains an integer N, the lenght of Antonio's journey in minutes.

The next line contains N integers, the i-th of which represents the difference D_i in altitude recorded during the i-th minute.

Output

You need to write a single line containing the final altitude reached by Antonio.

Constraints

- $2 \leq N \leq 1000$.
- $-3 \leq D_i \leq 3$.

Examples

input	output
8 3 -1 2 -2 1 3 0 -3	3003